CHAPTER 12

Large-Scale Considerations

The following topics are covered in this chapter:

- Database cache
  - Configuring dynamic cache settings
  - Configuring static cache settings
  - Using NDS iMonitor to fine-tune database settings
- Memory management
- LDAP considerations
  - Indexes
  - Tree design
- Processor considerations
  - Speed of the processor
  - Number of processors
- Disk I/O
  - Disk cache
  - Direct Attached Storage
  - Checkpoint thread
- DIBClone
- DSREPAIR
  - Repairing a single object
  - Disabling reference checks
  - Repairing a replica
- Management utilities
  - NDS iMonitor
  - iManager

As the identity management marketplace grows, the demand for a scalable directory also grows. eDirectory is more scalable both vertically and horizontally than any of the other available directories. However, as you add more and more objects to eDirectory and make more and more requests to the eDirectory agent, you need to make sure that you have sufficient hardware to handle the load. You also need to consider some configuration issues.

Every eDirectory implementation is different. eDirectory is diverse in its implementation options. Because of this, it is impossible to cover every configuration option and hardware consideration in this text. The purpose of this chapter is to discuss in depth some of the most important things that you should consider when scaling your eDirectory implementation, beginning with the database cache.

Database Cache

The database cache, or FLAIM cache, is the cache that is allocated by the eDirectory agent, which can be utilized by the eDirectory database (FLAIM) to enhance performance. Accessing and updating information in memory is much faster than having to go to the disk system to process the data. Performance may increase if you load as much of the database into memory as possible without starving other processes of memory.

The following database configuration considerations are discussed in this section:

- Configuring dynamic cache settings
- Configuring static cache settings
- Using NDS iMonitor to fine-tune cache settings

Configuring Dynamic Cache Settings

The task at hand is to determine the maximum amount of memory to allocate toward eDirectory database cache. For general use, eDirectory has a built-in algorithm that attempts to do this. The dynamic mode cache algorithm attempts to allocate as much memory as it possibly can, leaving a sufficient amount of memory for other processes. Unfortunately, it is very hard to predict how much memory other processes require (the other processes also include the eDirectory application itself, as well as all other modules that run in the eDirectory process space). By default, dynamic mode consumes up to 80 percent of available cache. Often, however, 20 percent is not sufficient memory for all other applications and processes.